

**WHAT IS CLAIMED IS:**

1. An electrode sealing assembly designed for use with an electrosurgical instrument for sealing tissue, comprising:

first and second jaw members each having an insulative housing including at least one electromechanical interface and being movable from a first position in spaced relation relative to one another to at least one second position for grasping tissue therebetween, each of the jaw members including:

an electrically conductive sealing plate having at least one corresponding electromechanical interface which mates with the electromechanical interface of the insulative housing;

a thermally conductive, electrically non-conductive material disposed between the insulative housing and the electrically conductive sealing plate, the thermally conductive, electrically non-conductive material configured to engage at least one side of said sealing plate.

2. An electrode sealing assembly according to claim 1 wherein said thermally conductive, electrically non-conductive material is configured to encapsulate and secure the sealing plate to the insulative housing.
3. An electrode sealing assembly according to claim 1 wherein the thermally conductive, electrically non-conductive material of at least one jaw member includes first and second segments which join to encapsulate the sealing plate.
4. An electrode sealing assembly according to claim 1 wherein the insulative housing of at least one jaw member is made from a material selected from the group consisting of: nylon, syndiotactic-polystyrene, polybutylene terephthalate, polycarbonate, acrylonitrile butadiene styrene, polyphthalamide, polyimide, polyethylene terephthalate, polyamide-imide, acrylic, polystyrene, polyether sulfone, aliphatic

polyketone, acetal copolymer, polyurethane, nylon with polyphenylene-oxide dispersion and acrylonitrile styrene acrylate.

5. An electrode sealing assembly according to claim 1 wherein the thermally conductive, electrically non-conductive material of at least one jaw member is at least one of thermally conductive plastic and anodized aluminum.
6. An electrode sealing assembly according to claim 1 wherein the thermally conductive, electrically non-conductive material of at least one jaw member includes projections which extend laterally from an outer periphery of the insulative housing.
7. An electrode sealing assembly according to claim 1 wherein the electrically conductive sealing surface of at least one jaw member includes at least one stop member for controlling the distance between jaw members.
8. An electrode sealing assembly according to claim 1 wherein the electrically conductive sealing plate and the thermally conductive, electrically non-conductive material of at least one jaw member include tissue contacting surfaces which are substantially flush relative to one another.
9. An electrode sealing assembly according to claim 1 wherein the jaw members are disposed at an angle relative to a shaft of the electrosurgical instrument.
10. An electrode sealing assembly according to claim 1 wherein the electrode sealing assembly is disposable.

11. An electrode sealing assembly according to claim 1 wherein the insulative housing of at least one jaw member includes a support step which extends relative to an upper surface of the insulative housing, the support step being dimensioned to support the sealing plate thereon.
12. An electrode sealing assembly designed for use with an electrosurgical instrument for sealing tissue, comprising:
  - first and second jaw members being movable from a first position in spaced relation relative to one another to at least one second position for grasping tissue therebetween, each of the jaw members including:
    - an insulative housing having at least one electromechanical interface;
    - an electrically conductive sealing plate having at least one corresponding electromechanical interface which mates with the electromechanical interface of the insulative housing, at least one of the sealing plates of at least one of the jaw members including at least one stop member which extends therefrom; and
    - first and second thermally conductive, electrically non-conductive segments disposed between the insulative housing and the electrically conductive sealing plate, the thermally conductive, electrically non-conductive segments being joinable to encapsulate and secure the sealing plate to the insulative housing.
13. An electrode sealing assembly designed for use with an electrosurgical instrument for sealing tissue, comprising:
  - first and second jaw members being movable from a first position in spaced relation relative to one another to at least one second position for grasping tissue therebetween, each of the jaw members including:
    - an electrically conductive sealing plate; and
    - a thermally conductive, electrically non-conductive material being configured to engage a side of the sealing plate.

14. An electrode sealing assembly according to claim 13 wherein said thermally conductive, electrically non-conductive material is configured to encapsulate and secure the sealing plate to the insulative housing